



FRAV20030009 US NP Sequence Listing.txt
LISTE DE SEQUENCES

<110> AVENTIS PHARMA SA
GUILLAUME, Jean-Marc
DITTRICH, Werner
PEREZ, Sandrine
ANDREONI, Christine Michelle Pierrette
PAILLOT, Romain

<120> METHOD FOR OBTAINING MASTOCYTE LINES FROM PIG TISSUES AND FOR PRODUCING
HEPARIN-TYPE MOLECULES

<130> FRAV2003/0009 US NP

<140> 10/823,142
<141> 2004-04-13

<150> 60/477,962
<151> 2003-06-12

<150> FR 0304671
<151> 2003-04-14

<160> 34

<170> PatentIn Ver. 2.1

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tttaagaaaa aaaaaaaaaa aagtcgacat cgatacgctt ggtcaatcac tagtgaattc 3900
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<210> 2
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 <212> PRT
 <213> Sus scrofa

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Glu Leu Ser Pro Pro Ser Ile Gln Pro Ala Lys Ser Glu Leu Ile Val
          35          40          45
Ser Ala Gly Asp Glu Ile Arg Leu Phe Cys Thr Asp Pro Gly Ser Val
          50          55          60
Lys Trp Thr Phe Glu Thr Leu Gly Gln Leu Ser Glu Asn Thr His Ala
          65          70          75          80
Glu Trp Ile Val Glu Lys Ala Glu Ala Met Asn Thr Gly Asn Tyr Thr
          85          90          95
Cys Thr Asn Glu Gly Gly Leu Ser Ser Ser Ile Tyr Val Phe Val Arg
          100          105          110
Asp Pro Glu Lys Leu Phe Leu Val Asp Pro Pro Leu Tyr Gly Lys Glu
          115          120          125
Asp Asn Asp Ala Leu Val Arg Cys Pro Leu Thr Asp Pro Glu Val Thr
          130          135          140
Asn Tyr Ser Leu Thr Gly Cys Glu Gly Lys Pro Leu Pro Lys Asp Leu
          145          150          155          160
Thr Phe Val Ala Asp Pro Lys Ala Gly Ile Thr Ile Lys Asn Val Lys
          165          170          175
Arg Glu Tyr His Arg Leu Cys Leu His Cys Ser Ala Asn Gln Gly Gly
          180          185          190
Lys Ser Val Leu Ser Lys Lys Phe Thr Leu Lys Val Arg Ala Ala Ile
          195          200          205
Arg Ala Val Pro Val Val Ala Val Ser Lys Ala Ser Tyr Leu Leu Arg
          210          215          220
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Val	Lys	Arg	Asn	Ser	Trp	His	Gln	Gly	Asp	Phe	Asn	Phe	Leu	Arg	Gln	260	265	270	
Glu	Arg	Leu	Thr	Ile	Ser	Ser	Ala	Arg	Val	Asn	Asp	Ser	Gly	Val	Phe	275	280	285	
Met	Cys	Tyr	Ala	Asn	Asn	Thr	Phe	Gly	Ser	Ala	Asn	Val	Thr	Thr	Thr	290	295	300	
Leu	Glu	Val	Val	Asp	Lys	Gly	Phe	Ile	Asn	Ile	Phe	Pro	Met	Met	Asn	305	310	315	320
Thr	Thr	Val	Phe	Val	Asn	Asp	Gly	Glu	Asp	Val	Asp	Leu	Ile	Val	Glu	325	330	335	
Tyr	Glu	Ala	Tyr	Pro	Lys	Pro	Glu	His	Arg	Gln	Trp	Ile	Tyr	Met	Asn	340	345	350	
Arg	Thr	Ala	Thr	Asp	Lys	Trp	Glu	Asp	Tyr	Pro	Lys	Ser	Glu	Asn	Glu	355	360	365	
Ser	Asn	Ile	Arg	Tyr	Val	Ser	Glu	Leu	His	Leu	Thr	Arg	Leu	Lys	Gly	370	375	380	
Thr	Glu	Gly	Gly	Thr	Tyr	Thr	Phe	Leu	Val	Ser	Asn	Ala	Asp	Val	Asn	385	390	395	400
Ser	Ser	Val	Thr	Phe	Asn	Val	Tyr	Val	Asn	Thr	Lys	Pro	Glu	Ile	Leu	405	410	415	
Thr	His	Asp	Arg	Leu	Met	Asn	Gly	Met	Leu	Gln	Cys	Val	Ala	Ala	Gly	420	425	430	
Phe	Pro	Glu	Pro	Thr	Ile	Asp	Trp	Tyr	Phe	Cys	Pro	Gly	Thr	Glu	Gln	435	440	445	
Arg	Cys	Ser	Val	Pro	Val	Gly	Pro	Val	Asp	Val	Gln	Ile	Gln	Asn	Ser	450	455	460	
Ser	Val	Ser	Pro	Phe	Gly	Lys	Leu	Val	Ile	His	Ser	Ser	Ile	Asp	Tyr	465	470	475	480
Ser	Ala	Phe	Lys	His	Asn	Gly	Thr	Val	Glu	Cys	Arg	Ala	Tyr	Asn	Asp	485	490	495	
Val	Gly	Lys	Ser	Ser	Ala	Phe	Phe	Asn	Phe	Ala	Phe	Lys	Glu	Gln	Ile	500	505	510	
His	Ala	His	Thr	Leu	Phe	Thr	Pro	Leu	Leu	Ile	Gly	Phe	Val	Ile	Ala	515	520	525	
Ala	Gly	Met	Met	Cys	Ile	Ile	Val	Met	Ile	Leu	Thr	Tyr	Lys	Tyr	Leu	530	535	540	

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Gln	Lys	Pro	Met	Tyr	Glu	Val	Gln	Trp	Lys	Val	Val	Glu	Glu	Ile	Asn	
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Gly	Asn	Asn	Tyr	Val	Tyr	Ile	Asp	Pro	Thr	Gln	Leu	Pro	Tyr	Asp	His	
			565						570					575		
Lys	Trp	Glu	Phe	Pro	Arg	Asn	Arg	Leu	Ser	Phe	Gly	Lys	Thr	Leu	Gly	
			580					585					590			
Ala	Gly	Ala	Phe	Gly	Lys	Val	Val	Glu	Ala	Thr	Ala	Tyr	Gly	Leu	Ile	
		595					600					605				
Lys	Ser	Asp	Ala	Ala	Met	Thr	Val	Ala	Val	Lys	Met	Leu	Lys	Pro	Ser	
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Ala	His	Leu	Thr	Glu	Arg	Glu	Ala	Leu	Met	Ser	Glu	Leu	Lys	Val	Leu	
625					630					635					640	
Ser	Tyr	Leu	Gly	Asn	His	Met	Asn	Ile	Val	Asn	Leu	Leu	Gly	Ala	Cys	
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Thr	Ile	Gly	Gly	Pro	Thr	Leu	Val	Ile	Thr	Glu	Tyr	Cys	Cys	Tyr	Gly	
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Asp	Leu	Leu	Asn	Phe	Leu	Arg	Arg	Lys	Arg	Asp	Ser	Phe	Ile	Cys	Ser	
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Lys	Gln	Glu	Asp	His	Ala	Glu	Ala	Ala	Leu	Tyr	Lys	Asn	Leu	Leu	His	
	690					695					700					
Ser	Lys	Glu	Ser	Ser	Cys	Ser	Asp	Ser	Thr	Asn	Glu	Tyr	Met	Asp	Met	
705					710					715					720	
Lys	Pro	Gly	Val	Ser	Tyr	Val	Val	Pro	Thr	Lys	Ala	Asp	Lys	Arg	Arg	
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Ser	Ala	Arg	Ile	Gly	Ser	Tyr	Ile	Glu	Arg	Asp	Val	Thr	Pro	Ala	Ile	
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Ser	Tyr	Gln	Val	Ala	Lys	Gly	Met	Ala	Phe	Leu	Ala	Ser	Lys	Asn	Cys	
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Ile	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Ile	Leu	Leu	Thr	His	Gly	Arg	
785					790					795					800	
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Ser	Asn	Tyr	Val	Val	Lys	Gly	Asn	Ala	Arg	Leu	Pro	Val	Lys	Trp	Met	
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Ala	Pro	Glu	Ser	Ile	Phe	Asn	Cys	Val	Tyr	Thr	Phe	Glu	Ser	Asp	Val	
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Trp	Ser	Tyr	Gly	Ile	Phe	Leu	Trp	Glu	Leu	Phe	Ser	Leu	Gly	Ser	Ser	

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850

855

860

Pro Tyr Pro Gly Met Pro Val Asp Ser Lys Phe Tyr Lys Met Ile Lys
865 870 875 880

Glu Gly Phe Arg Met Leu Ser Pro Glu His Ala Pro Ala Glu Met Tyr
885 890 895

Asp Ile Met Lys Thr Cys Trp Asp Ala Asp Pro Leu Lys Arg Pro Thr
900 905 910

Phe Lys Gln Ile Val Gln Leu Ile Glu Lys Gln Ile Ser Glu Ser Thr
915 920 925

Asn His Ile Tyr Ser Asn Leu Ala Asn Cys Ser Pro His Arg Glu Asn
930 935 940

Pro Ala Val Asp His Ser Val Arg Ile Asn Ser Val Gly Ser Ser Ala
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<211> 8

<212> PRT

<213> Sus scrofa

<400> 3

Pro Leu Leu Val His Glu Asp Val

1

5

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<211> 936

<212> DNA

<213> Sus scrofa

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<213> Sus scrofa

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      20             25             30

Glu Leu Val Arg Lys Ala Ala Thr Leu Gln Asp Glu Val Arg Asp Ser
      35             40             45

Ala Ala Pro Asn Gly Ser Val Gln Gln Leu Pro Gln Thr Ile Ile Ile
      50             55             60

Gly Val Arg Lys Gly Gly Thr Arg Ala Leu Leu Glu Met Leu Ser Leu
      65             70             75             80

His Pro Asp Val Ala Ala Ala Glu Asn Glu Val His Phe Phe Asp Trp
      85             90             95

Glu Glu His Tyr Ser Gln Gly Leu Asp Trp Tyr Leu Ser Gln Met Pro
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Phe Ser Tyr Pro His Gln Leu Thr Val Glu Lys Thr Pro Ala Tyr Phe
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Thr Ser Pro Lys Val Pro Glu Arg Val His Arg Met Asn Pro Ser Ile
      130            135            140

Arg Leu Leu Leu Ile Leu Arg Asp Pro Ser Glu Arg Val Leu Ser Asp
      145            150            155            160

Tyr Thr Gln Val Phe Tyr Asn His Val Gln Lys His Lys Pro Tyr Pro
      165            170            175

Ser Ile Glu Glu Phe Leu Val Arg Asp Gly Arg Leu Asn Val Asp Tyr
      180            185            190
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Lys Ala Leu Asn Arg Ser Leu Tyr His Val His Met Gln Asn Trp Leu
195 200 205

Arg Phe Phe Pro Leu Arg Arg Ile His Ile Val Asp Gly Asp Arg Leu
210 215 220

Ile Arg Asp Pro Phe Pro Glu Ile Gln Lys Val Glu Arg Phe Leu Met
225 230 235 240

Leu Ser Pro Gln Ile Asn Ala Ser Asn Phe Tyr Phe Asn Lys Thr Lys
245 250 255

Gly Phe Tyr Cys Leu Arg Asp Gly Gly Arg Asp Arg Cys Leu His Glu
260 265 270

Ser Lys Gly Arg Ala His Pro Gln Ile Asp Pro Lys Leu Leu Asn Lys
275 280 285

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290 295 300

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<210> 7
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 <212> PRT
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<400> 7

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			20					25					30		
Tyr	Gln	Tyr	Ala	Gly	Pro	Gly	Leu	Ser	Leu	Gly	Ala	Pro	Gly	Gly	Arg
		35					40					45			
Ala	Pro	Pro	Asp	Asp	Leu	Asp	Leu	Phe	Pro	Thr	Pro	Asp	Pro	His	Tyr
	50					55					60				
Glu	Lys	Lys	Tyr	Tyr	Phe	Pro	Val	Arg	Glu	Leu	Glu	Arg	Ser	Leu	His
65					70					75					80
Phe	Asp	Met	Lys	Gly	Asp	Asp	Val	Ile	Val	Phe	Leu	His	Ile	Gln	Lys
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Thr	Gly	Gly	Thr	Thr	Phe	Gly	Arg	His	Leu	Val	Gln	Asn	Val	Arg	Leu
			100					105					110		
Glu	Val	Pro	Cys	Asp	Cys	Arg	Pro	Gly	Gln	Lys	Lys	Cys	Thr	Cys	Tyr
		115					120					125			
Arg	Pro	Asn	Arg	Arg	Glu	Thr	Trp	Leu	Phe	Ser	Arg	Phe	Ser	Thr	Gly
	130					135					140				
Trp	Ser	Cys	Gly	Leu	His	Ala	Asp	Trp	Thr	Glu	Leu	Thr	Asn	Cys	Val
145					150					155					160
Pro	Gly	Val	Leu	Asp	Arg	Arg	Asp	Pro	Ala	Ala	Leu	Arg	Thr	Pro	Arg
			165					170						175	

FRAV20030009 US NP Sequence Listing.txt

Lys Phe Tyr Tyr Ile Thr Leu Leu Arg Asp Pro Val Ser Arg Tyr Leu
180 185 190

Ser Glu Trp Arg His Val Gln Arg Gly Ala Thr Trp Lys Thr Ser Leu
195 200 205

His Met Cys Asp Gly Arg Thr Pro Thr Pro Glu Glu Leu Pro Pro Cys
210 215 220

Tyr Glu Gly Thr Asp Trp Ser Gly Cys Thr Leu Gln Glu Phe Met Asp
225 230 235 240

Cys Pro Tyr Asn Leu Ala Asn Asn Arg Gln Val Arg Met Leu Ala Asp
245 250 255

Leu Ser Leu Val Gly Cys Tyr Asn Leu Ser Phe Ile Pro Glu Gly Lys
260 265 270

Arg Ser Gln Leu Leu Leu Glu Ser Ala Lys Lys Asn Leu Arg Gly Met
275 280 285

Ala Phe Phe Gly Leu Thr Glu Phe Gln Arg Lys Thr Gln Tyr Leu Phe
290 295 300

Glu Arg Thr Phe Asn Leu Lys Phe Ile Arg Pro Phe Met Gln Tyr Asn
305 310 315 320

Ser Thr Arg Ala Gly Gly Val Glu Val Gly Glu Asp Thr Ile Arg Arg
325 330 335

Ile Glu Glu Leu Asn Asp Leu Asp Met Gln Leu Tyr Asp Tyr Ala Arg
340 345 350

Asp Leu Phe Gln Gln Arg Tyr Gln Tyr Lys Arg Gln Leu Glu Arg Arg
355 360 365

Gln Gln Arg Leu Arg Ser Arg Glu Glu Arg Leu Leu His Arg Ala Lys
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Glu Ala Pro Pro Arg Gly Asp Thr Glu Glu Pro Gly Arg Val Pro Thr
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Glu Asp Tyr Met Ser His Ile Ile Glu Lys Trp
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FRAV20030009 US NP Sequence Listing.txt

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FRAV20030009 US NP Sequence Listing.txt

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